UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,538	08/17/2005	Yasuhiro Saito	16169.5	9290

22913 7590 09/19/2008

WORKMAN NYDEGGER
60 EAST SOUTH TEMPLE
1000 EAGLE GATE TOWER
SALT LAKE CITY, UT 84111

EXAMINER	
ALANKO, ANITA KAREN	

ART UNIT	PAPER NUMBER
1792	

MAIL DATE	DELIVERY MODE
09/19/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,538	SAITO ET AL.	
	Examiner	Art Unit	
	Anita K. Alanko	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/31/08 - election*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *13-17* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/1/05;11/21/05;5/7/08;6/19/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I (claims 1-9 and 12) in the reply filed on 7/31/08 is acknowledged. However, examiner withdraws the restriction between Groups I and II and examines those two groups together. Thus, claims 1-12 and examined, and claims 13-17 are withdrawn from consideration as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear what patentable weight to give to "projections extending in a circumferential direction" – since all projections (even random projections) are along at least one circumference of the substrate surface at a particular radial distance. Since these are method claims, is there a particular method step that imparts a special type of circumferential texture? Or, would any polishing step give circumferential textures? Are all the textures the same/similar along any one circumference?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al (US 6,553,788 B1) in view of Fujimura et al (US 6,668,587 B2).

Ikeda discloses a method comprising:

forming a surface layer ("alteration layer", col.4, lines 7-12, "Process B" - col.8, lines 44-48) on a surface of a disk-shaped glass plate (col.8, line 36) having a predetermined composition (plate composition) and a predetermined chemical resistance (plate chemical resistance), with the surface layer having a composition (surface layer composition) differing from the plate composition (inherent in the alteration layer since the surface has been etched, col.3, lines 9-16) and a chemical resistance (surface layer chemical resistance) that is lower than the plate chemical resistance (inherent since the surface has been etched, and there is simultaneous removal and formation of a non-uniform surface layer, col.4, lines 8-12);

scrubbing ("Process D" col.8, line 58, col.7, lines 51-55) the surface with a scrub member (pad is expected to be the same as in the second embodiment, col.12, lines 22-57, Fig.3A-4D) to form a texture including a number of projections (a "fine texture", col.7, line 53) extending in a circumferential direction (inherent since scrubbing is the same process as the instant invention, i.e., rotation of a disk-shaped glass plate and scrubbing with a pad that has a length corresponding to the width of the plate, textures are expected to be formed in a circumferential direction, see for example Fig.3A-3C); and

selectively removing an upper portion of the surface layer that is part of the plurality of projections with an etching liquid (alkaline etching liquid, col.8, lines 59-61).

Ikeda fails to disclose that the scrubbing includes an abrasive. Fujimura teaches that after the usual magnetic disk processing steps (Ikeda discloses magnetic disk processing steps), (col.4, lines 14-24), that it is useful to improve cleaning by including an abrasive in the scrub-cleaning process (col.4, line 66-col.5, line 7). Therefore, it would have been obvious to one with ordinary skill in the art to include an abrasive in the scrubbing process of Ikeda because Fujimura teaches that it improves the cleaning effect of scrubbing.

As to the selective removal of the upper portion, this is inherent in the modified method of Ikeda because the same steps are conducted as in the instant invention. Thus although Ikeda may not recognize that the alkaline etching removes an upper surface portion, it is expected to inherently remove the upper portion since the alkaline etching step follows the surface layer formation and scrubbing steps.

As to claim 2, Ikeda discloses an alkaline etching liquid (col.8, lines 59-61).

As to claim 3, Ikeda discloses a glass substrate (col.5, lines 19-59) and said forming a surface layer includes decreasing the ingredient ratio of at least one component (col.5, lines 32-34) excluding silicon oxide so that the ingredient ratio of silicon oxide in the surface layer is greater than that in a portion excluding the surface layer (inherently by the hydrofluoric acid etching process).

As to claim 4, Ikeda discloses aluminum oxide and alkaline earth metal oxides (col.5, lines 43-50).

As to claim 5, since Ikeda has the same steps as the instant invention, the surface layer is expected to have at least a similar thickness as that cited. Still further, Ikeda recognizes that an alteration layer is formed and removed (col.4, lines 7-12) and that etching conditions should be modified to achieve the desired surface profiles (texture roughness, col.4, lines 13-63). Since the two depend on each other (alteration layer formation/removal and texture roughness), the surface layer thickness is a result-effective variable. It would have been obvious to one with ordinary skill in the art to vary the surface layer thickness to that cited because the surface layer thickness appears to reflect a result-effective variable which can be optimized. See MPEP 2144.05 IIB.

As to claim 6, Ikeda discloses to immerse the glass plate in a strong acid solution (col.8, lines 44-48). However a different embodiment suggests to use a pH of less than three (col.13 lines 50-54) and that the pH is a result effective variable since solubility of elements of glass increases (col.13, lines 53-54). It would have been obvious to one with ordinary skill in the art to vary the pH to that cited because the pH appears to reflect a result-effective variable which can be optimized. See MPEP 2144.05 IIB.

Further as to claim 6, Ikeda discloses that the alkaline solution has a pH of 11 (col.8, line 60), which is within the cited range.

As to claim 7, forming said texture as cited is inherent in the modified method of Ikeda because the same steps are conducted as in the instant invention. Thus although Ikeda may not recognize that the scrubbing reaches a lower layer, it is expected to do so since the scrubbing follows surface layer formation.

As to claim 8, see the rejection of claims 1-6, which have surface layer formation, immersing, dissolving of alkaline earth metal oxides, immersing in strong alkaline solution and etching as a result effective variable to optimize for best results (surface roughness).

As to claim 9, forming said ingredient ratio as cited is inherent in the modified method of Ikeda because the same steps are conducted as in the instant invention. Thus although Ikeda may not recognize the ingredient ratio as cited, it is expected to be at least similar since the same glass (an aluminosilicate) is processed as in the instant invention.

As to claim 10, see the rejection of claim 1. Further, Ikeda discloses polishing the glass plate to form a smooth surface ("Process A," col.8, lines 40-43). Flat upper surfaces are inherent since the same method steps are conducted as in the instant invention.

As to claim 11, see the rejection of claim 1.

As to claim 12, a second thickness less than a first thickness is inherent since the same method steps are conducted and the same final product appears to result (average surface roughness of 1.1 nm, and asperity of about 10, Table 1, Ex.1.)

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 7-18 of copending Application No. 10/532,564. Although the conflicting claims are not identical, they are not patentably distinct from each other because the "altered surface layer" of '564 is the same as the "surface layer" of the instant invention, and the compositions and chemical resistances are expected to be similar since '564 uses an acidic solution, which is the same as the instant invention. The "grinding" of '564 is the same as the "scrubbing" of the instant invention, and "alkaline washing" is expected to remove upper portions as in the instant invention since it is a strong alkaline solution, which is the same as the instant invention. It would have been obvious to circumferentially form textures as cited in the method of '564 because that would give information recording media radial symmetry to improve recording.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art shows methods of processing to form information recording media.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita K. Alanko whose telephone number is 571-272-1458. The examiner can normally be reached on Mon-Fri until 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571-272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anita K Alanko/
Primary Examiner, Art Unit 1792